

CLAIM AMENDMENTS

Claim Amendment Summary

Claims pending

- Before this Amendment: Claims 53-87.
- After this Amendment: Claims 53-87.

Non-Elected, Canceled, or Withdrawn claims: 1-52.

Amended claims: 53, 60, 66, 70, 74, and 82

New claims: None

Claims:

1-52. (Cancelled)

53. (Currently Amended) A processor-readable medium having processor-executable instructions that, when executed by a processor, performs a method comprising:

obtaining original goods;

embedding a watermark in the original goods, thereby producing a watermarked goods;

generating a stealthy representation of a defined key, wherein the defined key is a key for extracting the watermark from the watermarked goods;

producing a modified goods having the stealthy representation on the periphery of the original watermarked goods.

54. (Original) A medium as recited in claim 53, wherein the modified goods are an image embodied on either electronic or physical medium and the periphery, in a space domain, borders an outer edge of the original goods.

55. (Original) A medium as recited in claim 53, wherein the modified goods are a signal embodied on either electronic or physical medium and the periphery, in the time domain, precedes, follows, or both proceeds and follows the original goods.

56. (Original) A medium as recited in claim 53, wherein the modified goods are a signal embodied on either electronic or physical medium and the periphery, in the frequency domain, is within the frequencies outside a range of human perception.

57. (Original) A medium as recited in claim 53, wherein the original and modified goods are selected from a group consisting of image, audio, video, software, multimedia, database, and dataset.

58. (Original) A medium as recited in claim 53, wherein the generating comprises:

pseudo-randomly generating a defined number (p) different generator matrices \mathbf{G}_i for algebraic linear error correction codes;

split a defined input word (\mathbf{x}) into p segments;

producing a codeword (\mathbf{y}_i) from the input word from each segment (\mathbf{x}_i) using a pseudo-randomly formed generator matrix (\mathbf{G}_i) of an algebraic linear block code;

forming the stealthy representation via collecting multiple separately produced codewords together, wherein each separately produced codeword is generated from a segment of the input word.

59. (Original) A system comprising:

a processor and a memory;

a medium as recited in claim 53.

60. (Currently Amended) A method comprising:
obtaining original goods;
embedding a watermark in the original goods, thereby producing a
watermarked goods;
generating a stealthy representation of a defined key, wherein the defined
key is a key for extracting the watermark from the watermarked goods;
producing a modified goods having the stealthy representation on the
periphery of the original watermarked goods.

61. (Original) A method as recited in claim 60, wherein the modified goods are an image embodied on either electronic or physical medium and the periphery, in a space domain, borders an outer edge of the original goods.

62. (Original) A method as recited in claim 60, wherein the modified goods are a signal embodied on either electronic or physical medium and the periphery, in the time domain, precedes, follows, or both proceeds and follows the original goods.

63. (Original) A method as recited in claim 60, wherein the modified goods are a signal embodied on either electronic or physical medium and the periphery, in the frequency domain, is within the frequencies outside a range of human perception.

64. (Original) A method as recited in claim 60, wherein the original and modified goods are selected from a group consisting of image, audio, video, software, multimedia, database, and dataset.

65. (Original) A method as recited in claim 60, wherein the generating comprises:

- pseudo-randomly generating a defined number (p) different generator matrices \mathbf{G}_i for algebraic linear error correction codes;

- split a defined input word (\mathbf{x}) into p segments;

- producing a codeword (\mathbf{y}_i) from the input word from each segment (\mathbf{x}_i) using a pseudo-randomly formed generator matrix (\mathbf{G}_i) of an algebraic linear block code;

- forming the stealthy representation via collecting multiple separately produced codewords together, wherein each separately produced codeword is generated from a segment of the input word.

66. (Currently Amended) An encoder system comprising:
an obtaining means for obtaining original goods;
a watermark-embedding means for embedding a watermark in the original goods, thereby producing a watermarked goods;
a generating means for generating a stealthy representation of a defined key, wherein the defined key is a key for extracting the watermark from the watermarked goods;
a producing means for producing a modified goods having the stealthy representation on the periphery of the original watermarked goods.

67. (Original) A system as recited in claim 66, wherein the modified goods are an image embodied on either electronic or physical medium and the periphery, in a space domain, borders an outer edge of the original goods.

68. (Original) A system as recited in claim 66, wherein the modified goods are a signal embodied on either electronic or physical medium and the periphery, in the time domain, precedes, follows, or both proceeds and follows the original goods.

69. (Original) A system as recited in claim 66, wherein the modified goods are a signal embodied on either electronic or physical medium and the periphery, in the frequency domain, is within the frequencies outside a range of human perception.

70. (Currently amended) An encoder system comprising:
a good-retrieval unit configured to obtain original goods;
a watermark-embedder configured to embed a watermark in the original goods, thereby producing a watermarked goods;
a generator configured to generate a stealthy representation of a defined key, wherein the defined key is a key for extracting the watermark from the watermarked goods;
a modified-goods producer configured to produce a modified goods having the stealthy representation on the periphery of the original watermarked goods.

71. (Original) A system as recited in claim 70, wherein the modified goods are an image embodied on either electronic or physical medium and the periphery, in a space domain, borders an outer edge of the original goods.

72. (Original) A system as recited in claim 70, wherein the modified goods are a signal embodied on either electronic or physical medium and the periphery, in the time domain, precedes, follows, or both proceeds and follows the original goods.

73. (Original) A system as recited in claim 70, wherein the modified goods are a signal embodied on either electronic or physical medium and the periphery, in the frequency domain, is within the frequencies outside a range of human perception.

74. (Currently Amended) A processor-readable medium having processor-executable instructions that, when executed by a processor, performs a method comprising:

obtaining subject goods;

~~extract~~ extracting a stealthy representation of a defined key from a defined space, time, or frequency domain of the subject goods;

~~decode~~ decoding the defined key from the extracted stealthy representation;

using the decoded defined key, extracting a watermark from the subject goods.

75. (Original) A medium as recited in claim 74, wherein the subject goods are an image embodied on either electronic or physical medium and the space domain is part of the outer edge of the subject goods.

76. (Original) A medium as recited in claim 74, wherein the subject goods are a signal embodied on either electronic or physical medium and the time domain is towards the beginning, towards the end, or towards both of the subject goods.

77. (Original) A medium as recited in claim 74, wherein the subject goods are a signal embodied on either electronic or physical medium and the frequency domain is outside a range of human perception.

78. (Original) A medium as recited in claim 74, wherein the original and modified goods are selected from a group consisting of image, audio, video, software, multimedia, database, and dataset.

79. (Original) A medium as recited in claim 74, wherein the extracting further comprises extracting the stealthy representation from a combination of defined space, time, and frequency domains of the subject goods.

80. (Original) A medium as recited in claim 74, wherein
obtaining a received word (\mathbf{z});
splitting the received word into segments (\mathbf{z}_i);
generating a codeword for each segment by performing error correction
decoding for each segment using a pseudo-randomly formed generator matrix
(\mathbf{G}_i) of an algebraic linear block code;
forming a decoder output via collecting multiple separately produced
codewords together.

81. (Original) A goods authentication device comprising:
an audio and/or visual output unit;
a medium as recited in claim 74.

82. (Currently Amended) A method comprising:
obtaining subject goods;
~~extract~~ extracting a stealthy representation of a defined key from a defined space, time, or frequency domain of the subject goods;
decode decoding the defined key from the extracted stealthy representation;
using the decoded defined key, extracting a watermark from the subject goods.

83. (Original) A method as recited in claim 82, wherein the subject goods are an image embodied on either electronic or physical medium and the space domain is part of the outer edge of the subject goods.

84. (Original) A method as recited in claim 82, wherein the subject goods are a signal embodied on either electronic or physical medium and the time domain is towards the beginning, towards the end, or towards both of the subject goods.

85. (Original) A method as recited in claim 82, wherein the subject goods are a signal embodied on either electronic or physical medium and the frequency domain is outside a range of human perception.

86. (Original) A method as recited in claim 82, wherein the original and modified goods are selected from a group consisting of image, audio, video, software, multimedia, database, and dataset.

87. (Original) A method as recited in claim 82, wherein the extracting further comprises extracting the stealthy representation from a combination of defined space, time, and frequency domains of the subject goods.